

Appl. No. 10/812,464
Amdt. dated April 21, 2005
Reply to Office Action of January 21, 2005

REMARKS/ARGUMENTS

Claims 1-6 are pending. Claims 7-20 have been withdrawn. Claim 1 has been amended to incorporate the definition of a high tin content solder material from the specification in paragraph 23. No new subject matter has been added with this amendment.

A. 35 U.S.C. 102(b)

A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference. *Verdegaal Brothers v. Union Oil Co. of California*, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). The identical invention must be shown in as complete detail as is contained in the claim. *Richardson v. Suzuki Motor Co.*, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989).

Claims 1 and 2 – Bacon patent

Claims 1 and 2 stand rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 5,234,153 issued August 10, 1993 to Donald Bacon, et al. (hereinafter “the Bacon patent”) (Office Action, page 2).

Independent claim 1, from which claim 2 depends, contains the limitation of a high tin content solder material abutting said wetting layer. A high tin content solder material is defined

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in the specification as having at least about 75% tin by weight. The Bacon patent neither teaches nor suggests that a high tin content solder material having a least about 75% tin by weight.

In order to advance the prosecution of the present application the specification's definition of a high tin content solder material has been incorporated into independent claim 1.

Furthermore, independent claim 1 contains the limitation that the wetting layer abuts the molybdenum-containing barrier layer. The present Office Action contends that Bacon patent teaches "a wetting layer 23 abutting said molybdenum-containing barrier layer, col. 4, line 64 – col. 5, line 8". However, this is respectfully incorrect. The Bacon patent clearly teaches that the wetting layer 23 abuts an auxiliary layer 22 and the auxiliary layer 22 abuts the barrier layer 21 (i.e., there is a material layer between the wetting layer and the barrier layer).

Therefore, as the Bacon patent does not teach or suggest the identical invention in as complete detail as contained in the claim, reconsideration and withdrawal of the Section 102(b) rejection of claims 1 and 2 are respectfully requested.

B. 35 U.S.C. § 103(a)

M.P.E.P. 706.02(j) sets forth the standard for a Section 103(a) rejection:

To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach

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or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).

Claims 3 and 6 – Bacon patent and Greer patent

Claims 3 and 6 stand rejected under 35 U.S.C. § 103(a) as being obvious over the Bacon patent in view of U.S. Patent 6,689,680 issued February 10, 2004 to Stuart Greer (hereinafter “the Greer patent”) (Office Action, pages 3-4).

As previously discussed, independent claim 1, from which claims 3 and 6 depend, contains the limitation that the wetting layer abuts the molybdenum-containing barrier layer. The Bacon patent does not teach or suggest such a structure.

The Greer patent is relied upon with regard to claim 3 for a teaching of a high tin content solder and with regard to claim 6 for an alleged evidence of a wetting layer substantially subsumed in the high tin content solder material (applicants believe this second point to be an inaccurate reading of the Greer patent – nonetheless, it is not necessary to argue this point to overcome the current rejection). However, the Greer patent does not overcome the deficiencies of the Bacon patent, as the Greer patent also neither teaches nor suggests a wetting layer abutting a molybdenum-containing barrier layer.

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Therefore, as the Bacon patent and the Greer patent either alone or in combination do not teach or suggest all of the claim limitations of the present invention, reconsideration and withdrawal of the Section 103(a) rejection of claims 3 and 6 are respectfully requested.

Claims 4 and 5 – Bacon patent and Tomono publication

Claims 4 and 5 stand rejected under 35 U.S.C. § 103(a) as being obvious over the Bacon patent in view of U.S. Publication No. 2004/0253803 by Akira Tomono and Soichi Homma published December 16, 2004 (hereinafter “the Tomono publication”) (Office Action, page 4).

As previously discussed, independent claim 1, from which claims 4 and 5 depend, has been amended to clarify the limitation of a high tin content solder material being a material having at least about 75% tin by weight.

Neither the Bacon patent nor the Tomono publication, either alone or in combination, teaches nor suggests that a high tin content solder material having a least about 75% tin by weight.

Therefore, reconsideration and withdrawal of the Section 103(a) rejection of claims 4 and 5 are respectfully requested.

In view of the foregoing amendments and remark, the Applicants request allowance of the application. Please forward further communications to the address of record. If the

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Examiner needs to contact the below-signed attorney to further the prosecution of the application, the contact number is (208) 433-9217.

Respectfully submitted,

Dated: April 21, 2005

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